

In the Claims

24. A method of performing coordination exercises for neuromotor training, the method comprising:

C2 flexing a first joint of a patient such that a cursor on a display moves to reach a target position on the display at a selected, predetermined time, the motion of the cursor being correlated with the motion or strain of the joint by way of a sensor in an ambulatory orthosis placed at the joint, the ambulatory orthosis comprising a support portion that fits around the joint such that the ambulatory orthosis is carried by the patient during the flexing step.

25. The method of claim 24 wherein the orthosis comprises:

a first support portion that fits around a first body portion on a first side of the joint;

a second support portion that fits around a second body portion, the second body portion being on the opposite side of the joint from the first body portion;

a flexible connection connecting the first support portion and the second support portion;

a position sensor operably connected to the flexible connection such that the position sensor detects the relative orientation of the first support portions with respect to the second support portion.

26. The method claim of 24 wherein the sensor is operably connected to a portable controller comprising a digital microprocessor.

27. The method of claim 24 wherein the cursor motion is correlated with the strain of a joint by way of a strain sensor.

28. The method of claim 24 wherein the cursor moves in two dimensions with the motion in one dimension corresponding to output of a position sensor and motion in the other dimension corresponding to output of a strain sensor.

29. The method of claim 24 further comprising flexing a second joint to simultaneously vary the display along with motion of the first joint, wherein variations in the display due to motion of the second joint is determined by the output of a position or strain sensor at the second joint.

30. The method of claim 29 wherein the sensors are operably connected to a portable controller comprising a digital microprocessor, the digital microprocessor providing a target for the flexing of the first and second joint on the display.

31. The method of claim 24 wherein the sensor is selected from the group consisting of a strain sensor and a position sensor.

50. An ambulatory orthosis system, the ambulatory orthosis system comprising:

a display,

a support portion that fits around a joint and is carried by the patient during activities and a sensor on the support portion, and

a controller operably connected to the sensor, wherein the controller controls the display based on signals from the sensor, and